Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. - 6. (Canceled)

7. (Previously Presented) The method of claim 13, wherein providing a current position of the cam comprises-capturing a position of the cam with a sensor that is coupled to the positional controller.

8. -11. (Canceled)

12. (Previously Presented) The method of claim 13, wherein providing a current position of the cam comprises calculating a position of the cam with a signal from an integral rotor position sensor of the motor.

13. (Currently Amended) A method for controlling a metering cycle of a pump, the pump including a diaphragm coupled to a ram, the ram being moved by a cam, which is rotated by a shaft of an electric motor, in order to displace the diaphragm in a first direction, for a compression stroke of the metering cycle, and then in a second direction for an aspiration stroke of the metering cycle, the method comprising:

providing input of a required quantity of a metered medium to a positional controller that is coupled to a controller of the electric motor~~, the required quantity being that to be delivered during the compression stroke of the metering cycle~~;

providing input of a current position of the rotating cam to the positional controller;

calculating a currently required rotating speed for the motor based upon the input of the required quantity of the metered medium and the current position of the rotating cam~~,~~

~~only if the current position of the rotating cam corresponds to the compression stroke of the metering cycle, the calculating being carried out by the positional controller~~;

transmitting, from the positional controller to the controller of the motor, the calculated currently required rotating speed of the motor, the motor being an EC motor; and

adjusting a rotating field inside the motor to reach the calculated currently required rotating speed, the adjusting being carried out by the controller of the motor during the compression stroke of the metering cycle; and

wherein the rotation speed varies during substantially the entire duration of the compression stroke to maintain a substantially constant rate of delivery of the metered medium and wherein the rotational speed during substantially the entire duration of the aspiration stroke is constant and at the maximum rotation speed of the motor.

14. (Canceled)

15. (Currently Amended) A method for controlling a ram actuated diaphragm pump comprising:

providing an electronically commuted motor for driving linear reciprocation of a ram in a first direction corresponding to a compression stroke and a second direction corresponding to an aspiration stroke;

varying a rotational speed of the commuted motor to maintain a substantially constant linear speed of the ram during substantially the entire duration of a compression stroke.

16. (Currently Amended) The method of claim 15, wherein the rotational speed of the commuted motor is varied based in part on a sensed rotor position and a sensed cam position and is independent from the load on the motor.

17. (Previously Presented) The method of claim 15, wherein varying the rotational speed of the electronically commuted motor during the compression stroke includes rotating the motor at a

relatively high speed at the start of the compression stroke, rotating the motor at a relatively low speed approximately mid way into the compression stroke, and increasing the rotating speed towards the end of the compression stroke.

18. (Currently Amended) The method of claim 15, wherein the ~~linear speed of the ram~~ the rotational speed of the motor is increased ~~at~~ shortly before the end of the compression stroke to compensate for the metering gap during the aspiration stroke.

19. (Previously Presented) The method of claim 15, wherein the rotational speed of the commuted motor is maintained substantially constant relatively high speed during the aspiration stroke, while the linear speed of the ram varies.

20. (Previously Presented) The method of claim 19, wherein an average speed of the ram during the compression stroke is substantially less than an average speed of the ram during the aspiration stroke.